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CS 2365-001

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OOP Project 4: Phase 4 Report

For installation instruction and testing procedures please proceed to the README text file contained in this folder.

**Questions:**

What is the fulfillment supposed to represent?

The thing about this is that each can take away what they believe to be the meaning of it. As long as they continue to apply their own thoughts of what it is the data will remain consistent with what they put. Personally I think it is just how enjoyable ones work day or project work was for the day, was it miserable or the most exciting day in a while.

**Explaining things not in slides:**

Classes

* LoginWindow
  + A class that when implemented is a JFrame window that lets the user login or create a user. Checks the database for correct data and does not allow duplicate accounts. Will open the WelcomeMenuScreen upon logging in.
* WelcomeMenuScreen
  + A class that extends JFrame and when instantiated is a window that displays the main options of the program for the user to choose, viewing old entries, viewing data on those entries, or adding an entry. When the user picks any of these it will open their respective windows.
* ViewDataScreen
  + Another class that represents a window. This one shows a radio button group where you choose which type of chart you would like to see. Once you choose one and press the button it will open a Charts object based on what your choose.
* AddEntryScreen
  + A window class that represents a window. This one allows your to put in your entry for the day and then submit it to the database. It will check you have at least filled in the required information (marked with \*) before submitting. Once submitted will bring you back to welcome menu. Can only submit one entry a day.
* ViewEntryScreen
  + This is where you look at all the old entries. Opened by the welcome menu. This class calls the DataBaseHelper to get all the entries. It puts each entry from this user into an entry class and then creates an ArrayList of JPanels based on these entries to throw into the scroll area in the view entry screen. This means that no matter how many entries a user makes they will all fit into this view due to the scrollbar.
* DatabaseHelper
  + Support class for all the other classes. Basically any database query or command to the database is handle through this class. It does all the returns for the chart data and adds the entries from the add entry screen. Just anything database related.
* Entry
  + This is the class that represents one entry. It contains all the info an entry contains.
* Charts
  + This is a class that’s constructor takes an integer. Based on that integer it will decide what type of chart it needs to make and then creates that chart and fills it in with data from methods in the DataBaseHelper.

In many of the classes they will pass an instance of a DataBaseHelper object along from one to the other.

OOP Concepts Applied

* Inheritance
  + Most classes inherit from JFrame.
* Generics
  + ArrayList and command queries.
* ArrayList<>
  + Past back for most the database queries for other methods to iterate through.
* Code reuse
  + Reused many database functions for different purposes so that it didn’t have to take up so many lines. One example of this is the getHoursAndHappy method in the database class.
* Error checking
  + For many of the database functions it needed to make sure that the database existed and check that the query was right and in the case that an error was thrown print that error or create a new database.
  + Input validation on both the login screen and add entry screen.

Functions Uses:

* Most all the functions in the project are documented in the code itself.
* All the classes that extend JFrame have constructors that will open it’s window and show it on the object creation.